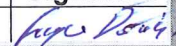

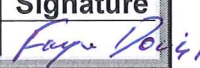


## TOOL SUMMARY FORM (PER TOOL)

<b>Vendor/Tool: GE</b>				<b>Profile edition No: Enterprise Gateway</b>			
<b>Witnessed by</b>							
<b>Name</b>		<b>Signature</b>		<b>Name</b>		<b>Signature</b>	
1. Dariusz Furga		<i>see single forms</i>		7.			
2. Chris Nendick		<i>see single forms</i>		8.			
3. Rogowski Tomasz		<i>see single forms</i>		9.			
4. Oana Udrea		<i>see single forms</i>		10.			
5.				11.			
6.				12.			
<b>Performed tests</b>							
Test No	Score	Test No	Score	Test No	Score	Test No	Score
1-2	4	13-1	4				
2-2	4	14-1	4				
3-1	4	15-1	4	27-1	4		
4-2	4	16-1	4	28			
5-2	4			29			
6-1	4			30-1	4		
7-1	4			31-1	4		
8				32-1	4		
9-1	4			33-1	4		
10-1	4						
11-1	4						
12-1	4						
<b>Comments:</b>							
<p>The short circuit data seems still not complete and the IEC example is not a good one for other vendors to reproduce, we would expect this data with a more realistic model like the Entso-E one.</p>							
<b>Date</b>		<b>Vendor</b>		<b>ENTSO-E</b>			
July 15		<b>Name</b>		<b>Name</b>		<b>Signature</b>	
		Feng CHEN		Chavdar Ivanov		<i>[Signature]</i>	

## SINGLE TEST RECORD FORM

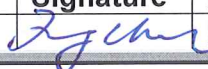
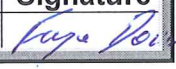
Test No:1_2	Profile edition No: 2nd	Tool: Enterprise Gateway	Score:4
<b>Test files:</b>			
<b>Import</b>		<b>Export</b>	
1. ENTSOE_16_BE.zip 2. ENTSO-E_Boundary_Set_28_June_2011_2ndEdition_EU.zip			
<b>Comments/Results/Issues:</b>			
<p>The following items were checked:          Transformer Resistance and Reactance of TG1 of Area BE          Load data of area BE          Bus Voltage data of area BE          Tie flow data between area BE and EU</p> <p>The power flow gave the same results as from the original data of the model.</p> <p>During the course, the tool needs generated temporary files to merge the EQ and/or TP model of EU and BE. The supplement files are listed as below.</p> <p>The ENTSOE_16_BE.zip was unzipped to get the following files and were inputted to the tool          ENTSOE_16_BE_EQ.xml          ENTSOE_16_BE_TP.xml          ENTSOE_16_BE_SV.xml</p> <p>The ENTSO-E_Boundary_Set_28_June_2011_2ndEdition_EU.zip was unzipped by tool itself to get the following files in.          ENTSO-E_Boundary_Set_28_June_2011_2ndEdition_EU_EQ.xml          ENTSO-E_Boundary_Set_28_June_2011_2ndEdition_EU_TP.xml</p>			
<b>Supplementary files:</b>			
Merged EQ of EU and BE: ENTSOE_16_BE_EU_eg_12J16h_EQ.xml Merged TP of EU and BE: ENTSOE_16_BE_EU_eg_12J16h_TP.xml Screen shot: eg_test01_solution_screen.doc			
<b>Date</b>	<b>Vendor</b>	<b>Test witness</b>	
July 12	<b>Name</b>	<b>Name</b>	<b>Signature</b>
	Feng CHEN	Dariusz Furga	

<b>Test No:</b> 2_2	<b>Profile edition No:</b> 2nd		<b>Tool:</b> Enterprise Gateway	<b>Score:</b> 4
<b>Test files:</b>				
<b>Import</b>			<b>Export</b>	
1. ENTSOE_16_BE.zip			ENTSOE_16_BE_eg_11J11h.zip	
2. ENTSO-E_Boundary_Set_28_June_2011_2ndEdition_EU.zip				
<b>Comments/Results/Issues:</b>				
<p>Cimspy was used to check all the instance counts and some instance details as below.</p> <p>ACLineSegment TopologicalNode BaseVoltage</p> <p>rdf:ID are also checked between original models and exported models for some of the elements.</p> <p>ENTSOE_16_BE_eg_12J14h.zip consists of the following files</p> <p>ENTSOE_16_BE_eg_12J14h_EQ.xml ENTSOE_16_BE_eg_12J14h_TP.xml ENTSOE_16_BE_eg_12J14h_SV.xml</p>				
<b>Supplementary files:</b>				
<p>ENTSOE_16_BE_eg_12J14h_EQ_CimSpy_Summary.doc</p> <p>With list of object counts and ACLineSegment detail</p> <p>Also check Test 1_1 eg_test01_solution_screen.doc for instance file</p>				
<b>Date</b>	<b>Vendor</b>		<b>Test witness</b>	
July 11	<b>Name</b>	<b>Signature</b>	<b>Name</b>	<b>Signature</b>
	Feng CHEN		Dariusz Furga	

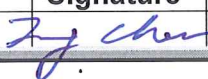

## SINGLE TEST RECORD FORM

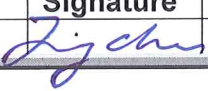

<b>Test No:</b> 3_1	<b>Profile edition No:</b> 2	<b>Tool:</b> Enterprise Gateway	<b>Score:</b> 4	
<b>Test files:</b>				
<b>Import</b>		<b>Export</b>		
\\172.16.12.4\Public\ENTSO-E_2nd_IOP_July2011\5_Official_Test_Models\Profile_Edition_2\ENTSO-E_16 V211_8July2011 ENTSOE_16_BE.zip				
<b>Comments/Results/Issues:</b>				
We compare the voltage values and load flow results from DMS Group EKC (TNA_Loadflow_BE) with the results from GE (GE_Loadflow_BE).				
The following elements were checked:				
		TNA	GE	delta
Node 7:	U1 [kV]:	115.5	115.5	0.0%
(PT 1 – 7)	U7 [kV]:	11	11.02	0.1%
Node 3	P [MW]:	-104.7	-104.7	0.0%
(PPBRU220 – C4)	Q [MVar]:	34.7	34.7	0.0%
<b>Supplementary files:</b>				
\\172.16.12.4\Public\ENTSO-E_2nd_IOP_July2011\GE\2nd_Profile\Test3.1\eg_test03_solution_screen.doc				
<b>Date</b>	<b>Vendor</b>	<b>Signature</b>	<b>Test witness</b>	
July 12	<b>Name</b>	<b>Name</b>	<b>Signature</b>	
	Feng CHEN	Oana Udrea		

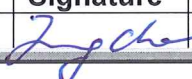
<b>Test No:</b> 4_2	<b>Profile edition No:</b> 2nd	<b>Tool:</b> Enterprise Gateway	<b>Score:</b> 4
<b>Test files:</b>			
<b>Import</b>		<b>Export</b>	
1. ENTSOE_16_BE.zip		ENTSOE_16_BE_EU_eg_tpChn	
2. ENTSO-E_Boundary_Set_28_June_2011_2ndEdition_EU.zip		g.zip	
<b>Comments/Results/Issues:</b>			
<p>The three winding transformer 3wT1's terminal that connected to Bus BRU220 is moved to ANVER220</p> <p>ENTSOE_16_BE_EU_eg_tpChng.zip consists of the following file  ENTSOE_16_BE_EU_eg_tpChng_12J14h_TP.xml  ENTSOE_16_BE_EU_eg_tpChng_12J14h_SV.xml</p>			
<b>Supplementary files:</b>			
<p>eg_test04_solution_screen.doc  With power flow data for Load, Bus, Line and the changed Transformer</p> <p>ENTSOE_16_BE_eg_12J14h_tpChng_CimSpy_Summary.doc  With list of object counts and TopologicalNode detail</p>			
<b>Date</b>	<b>Vendor</b>	<b>Signature</b>	<b>Test witness</b>
July 12	<b>Name</b>	<b>Name</b>	<b>Signature</b>
	Feng CHEN	Dariusz Furga	<i>[Signature]</i>

<b>Test No:5_2</b>	<b>Profile edition No: 2nd</b>	<b>Tool: Enterprise Gateway</b>	<b>Score:4</b>
<b>Test files:</b>			
<b>Import</b>		<b>Export</b>	
1. ENTSOE_16_BE.zip		ENTSOE_16_BE_EU_eg_svChng.zip	
2. ENTSOE-E_Boundary_Set_28_June_2011_2ndEdition_EU.zip			
<b>Comments/Results/Issues:</b>			
<p>Change the Load L1 P at Bus PPBRU220 from 200MW to 250MW,  Change the Generator "Unit G1" at Bus PPBRUG21, Q from 18.8MVar to -5MVar, P from 118.2MW to 160MW</p> <p>ENTSOE_16_BE_EU_eg_svChng.zip consists of the following file  ENTSOE_16_BE_EU_eg_svChng_12J14h_SV.xml</p>			
<b>Supplementary files:</b>			
<p>eg_test05_solution_screen.doc  With power flow data for Load, Bus, Line and Generator</p> <p>ENTSOE_16_BE_eg_12J14h_svChng_CimSpy_Summary.doc  With list of object counts and svInjection detail</p>			
<b>Date</b>	<b>Vendor</b>	<b>Test witness</b>	
July 11	<b>Name</b>	<b>Signature</b>	<b>Name</b>
	Feng CHEN		Dariusz Furga
			

<b>Test No:6_1</b>	<b>Profile edition No: 2nd</b>	<b>Tool: Enterprise Gateway</b>	<b>Score:4</b>
<b>Test files:</b>			
<b>Import</b>		<b>Export</b>	
1. ENTSOE_16_BE.zip 2. Test4.1_2sc_TN_12J13h30.zip (from DMS) 3. ENTSO-E_Boundary_Set_28_June_2011_2ndEdition_EU.zip			
<b>Comments/Results/Issues:</b>			
<p>Noticed the change "Line 1" (to be offline) was imported</p> <p>Inspected the snapshots of power flow solution from DMS (test no4, profile ed.2). The results converge within &lt;2% (they matches within engineering tolerance).</p>			
<b>Supplementary files:</b>			
eg_test06_solution_screen.doc With power flow data for Bus, Line			
<b>Date</b>	<b>Vendor</b>	<b>Signature</b>	<b>Test witness</b>
July 13	<b>Name</b>	<b>Name</b>	<b>Signature</b>
	Feng CHEN	Rogowski Tomasz	

<b>Test No:</b> 7_1	<b>Profile edition No:</b> 2nd	<b>Tool:</b> Enterprise Gateway	<b>Score:</b> 4
<b>Test files:</b>			
<b>Import</b>		<b>Export</b>	
1. ENTSOE_16_BE.zip 2. ENTSO-E_Boundary_Set_28_June_2011_2ndEdition_EU.zip 3. ENTSOE_2_BE_OD_12J09h.zip (from Siemens)			
<b>Comments/Results/Issues:</b>			
Noticed the change of generation for "Unit G1" and load change for load "L1" was imported  Inspected the snapshots from Siemens for test 5 and they matches within engineering tolerance			
<b>Supplementary files:</b>			
eg_test07_solution_screen.doc With power flow data for Load, Bus, Line and Generator			
<b>Date</b>	<b>Vendor</b>	<b>Signature</b>	<b>Test witness</b>
July 13	<b>Name</b> Feng CHEN	<b>Signature</b> 	<b>Name</b> Dariusz Furga
			<b>Signature</b> 

<b>Test No:9_1</b>	<b>Profile edition No: 2nd</b>	<b>Tool: Enterprise Gateway</b>	<b>Score:4</b>
<b>Test files:</b>			
<b>Import</b>		<b>Export</b>	
1. ENTSOE_16_BE.zip 2. ENTSOE_16_NL.zip 3. ENTSOE- E_Boundary_Set_28_June_2011_2ndEdition_EU.zip		ENTSOE_16_eg_test9Exp_12J9h.zip	
<b>Comments/Results/Issues:</b>			
ENTSOE_16_eg_test9Exp_12J9h.zip contains ENTSOE_16_BE_eg_12J9h_EQ.xml ENTSOE_16_BE_eg_12J9h_TP.xml ENTSOE_16_NL_eg_12J9h_EQ.xml ENTSOE_16_NL_eg_12J9h_TP.xml ENTSOE_16_EU_eg_12J9h_EQ.xml ENTSOE_16_EU_eg_12J9h_TP.xml ENTSOE_16_BE_NL_eg_11J16h_SV.xml ENTSOE_16_BE_EU_NL_eg_tpChng_12J9h_TP.xml ENTSOE_16_BE_EU_NL_eg_tpChng_12J9h_SV.xml			
<b>Supplementary files:</b>			
eg_test09_solution1_screen.doc With power flow data for Load, Bus, Line and Generator before change eg_test09_solution2_screen.doc With power flow data for Load, Bus, Line and Generator after change  ENTSOE_16_eg_12J9h_CimSpy_Summary.doc With list of object counts			
<b>Date</b>	<b>Vendor</b>	<b>Signature</b>	<b>Test witness</b>
July 12	<b>Name</b> Feng CHEN	<b>Signature</b> 	<b>Name</b> Dariusz Furga
			<b>Signature</b> 

<b>Test No:</b> 10_1	<b>Profile edition No:</b> 2nd	<b>Tool:</b> Enterprise Gateway	<b>Score:</b>
<b>Test files:</b>			
<b>Import</b>		<b>Export</b>	
1. ENTSO-E_2nd_IOP_July2011\Open Grid Systems\2nd_Profile\Test 9\ENTSOE16_OGS_13J12h.zip (FROM OGS) 2. ENTSO-E_Boundary_Set_28_June_2011_2ndEdition_EU.zip			
<b>Comments/Results/Issues:</b>			
After merge the 2 MAS and boundary and import merged SV file, Compared results between this test and the ones from Open Grid Systems of test 9, the bus voltage, generation and load matches within engineering tolerance.			
<b>Supplementary files:</b>			
eg_test10_solution_screen.doc With power flow data for Bus, Line and System level			
<b>Date</b>	<b>Vendor</b>	<b>Test witness</b>	
July 14	<b>Name</b>	<b>Signature</b>	<b>Name</b> <b>Signature</b>
	Feng CHEN		Chris Nendick 